

ENVIRONMENTAL CHECKLIST

A. BACKGROUND

1. Name of proposed project, if applicable:

Boeing Renton Facility Soil and Groundwater Cleanup Action

2. Name of applicant:

The Boeing Company

3. Address and phone number of applicant and contact person:

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Environmental Remediation
The Boeing Company
P.O. Box 3707, M/S 1W-12
Seattle, WA 98124-2207

Phone 206 898-0438

4. Date checklist prepared:

January 27, 2011

5. Agency requesting checklist:

Washington State Department of Ecology

6. Proposed timing or schedule (including phasing, if applicable):

Remedial Action Design and Permitting Phases	2011-2012
Remedial Action Implementation	2012-2013
Remedial Action Monitoring	2013-2043

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

None planned at this time.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

The Remedial Investigation Report, Boeing Renton Plant, Renton, Washington Volumes I & II, prepared by Roy F. Weston, August 10, 2001; the Draft Final Feasibility Study Report, Boeing Renton Facility, Renton, Washington, prepared by Geomatrix Consultants, Inc., June 2008; and the Final Draft Cleanup Action Plan, Boeing Renton Facility, prepared by

AMEC Geomatrix, Inc., February 2010, revised October 2010, have all been completed and contain relevant environmental information about the proposal.

9. **Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.**

None are pending.

10. **List any government approvals or permits that will be needed for your proposal, if known.**

Federal:

None known at this time.

State of Washington:

Shoreline permit (as needed)
Well Installation permits
Underground Injection Control permits

King County:

Puget Sound Clean Air Agency permit modification

City of Renton/Local:

City of Renton (City) approval for groundwater monitoring on City property (conditional points of compliance). Approval has been obtained.

11. **Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)**

The proposal is for soil and groundwater cleanup of the facility under the State of Washington Dangerous Waste Regulations (Chapter 173-303 WAC) and Model Toxics Control Act (Chapter 173-340 WAC). The proposal does not change the use or the size of the site. Twelve existing areas of the facility with known soil and/or groundwater concentrations exceeding established cleanup levels are included in the proposal. Specific cleanup approaches have been identified in the Draft Cleanup Action Plan (DCAP) and these cleanups will be designed, implemented, and monitored under this plan.

12. **Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and**

section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

Site address: 8th and Logan Avenue North
Renton, Washington

Refer to Exhibit A-1 Vicinity Map and Exhibit A-2 Site Plan for project location (see attached).

B. ENVIRONMENTAL ELEMENTS

1. Earth

- a. General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other.

Flat

- b. What is the steepest slope on the site (approximate percent slope)?

1%

- c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

Sandy silt loam

- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

Yes. According to the City sensitive areas maps, parts of the facility have soils that may be susceptible to liquefaction in the event of an earthquake.

- e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

Very minor excavation of contaminated soils will occur at AOC-092. Backfill will occur with clean soils; however, the source of the clean backfill soils has not been determined at this time.

- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

No

- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

No change

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Small amounts of soils will be excavated from shallow depths and the soils excavated will be loaded directly into containers so that they are not susceptible to erosion.

2. Air

- a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, and industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

During implementation, construction equipment emissions in minimum quantities may occur but will have no long-term effects. One of the proposed remedies, soil vapor extraction (SVE) may result in air emissions; however, these emissions will be in accordance with requirements and possible permit conditions required by the Puget Sound Clean Air Agency.

- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No

- c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Mitigation measures will be implemented as required to meet or exceed all applicable standards as required by the Puget Sound Clean Air Agency. Additional potential mitigation measures to reduce emissions include ensuring that machines and equipment used during construction are well maintained.

3. Water

- a. Surface:

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

The work will be done near Lake Washington and the Cedar River which flows into Lake Washington.

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Yes, adjacent to both the Cedar River and/or Lake Washington for six of the twelve areas as discussed below. For more details, see plans in the Draft Cleanup Action Plan.

SWMU-168: SWMU-168 consists of the area around a former underground storage tank (UST) on property leased from the City at the Renton Municipal Airport. Constituents of concern (COCs) consist of methylene chloride in soil and vinyl chloride (VC) in groundwater. Three remedial alternatives were evaluated in the Draft Final Feasibility Study (FS) for SWMU-168: (1) monitored natural attenuation (MNA); (2) soil vapor extraction (SVE) and monitored attenuation (MA); and (3) enhanced bioremediation and MA. Soil and groundwater samples collected at SWMU-168 in May 2008 did not contain detectable levels of COCs, and therefore further active measures to reduce COC concentrations may not be necessary. Therefore, Alternative 1, MNA with institutional controls, is the proposed cleanup action for SWMU-168.

SWMU-172/174: SWMU-172/174 are the locations of former wastewater USTs on property leased from the City on the eastern side of the Renton Municipal Airport. COCs consist of chlorinated solvents, solvent degradation products, benzene, and metals in soil, and chlorinated solvents, solvent degradation products, benzene, one semivolatile organic compound (SVOC), and metals in groundwater. Three cleanup alternatives were evaluated in the FS for SWMU-172/174: (1) source area excavation, enhanced bioremediation, and MA; (2) SVE, enhanced bioremediation, and MA; and (3) MNA. The proposed cleanup action for SWMU-172/174 consists of SVE, enhanced bioremediation, MA, and institutional controls. The cost for this alternative, while higher than other alternatives, provides greater benefits commensurate with the greater cost.

AOC-001 and AOC-002: AOC-001 and AOC-002 were originally associated with former USTs located approximately 350 feet southeast of Lake Washington in the northern portion of the facility. COCs for AOC-001 and AOC-002 consist of TCE, degradation products of TCE, and gasoline in soil, and benzene, chlorinated solvents, solvent degradation products, and naphthalene in groundwater. Two cleanup alternatives were evaluated in the FS: (1) enhanced bioremediation and MA; and (2) MNA. The proposed cleanup action for AOC-001/002 is enhanced bioremediation and MA. The remediation costs for this alternative are not considered disproportionate, and this alternative would provide a more rapid restoration time frame than the other alternative considered.

AOC-060: AOC-060 consists of a former vapor degreaser secondary containment sump located inside Building 4-42. COCs are TCE and TCE degradation products in groundwater. Three cleanup alternatives were

evaluated in the FS: (1) MNA; (2) enhanced bioremediation and MA; and (3) air sparging, SVE, and MA. MNA was selected as the preferred alternative for AOC-060 because it would provide the greatest benefit at the lowest cost. The City of Renton has approved an off-site conditional point of compliance for this AOC located in the Cedar River Trail Park.

AOC-090: AOC-090 is located near the southwest corner of former Building 4-64. Elevated concentrations of selected volatile organic compounds (VOCs) were encountered at AOC-090 during excavation for underground utilities in July 1999. COCs for AOC-090 are several VOCs, several metals, several SVOCs, and fuel constituents in soil, and VOCs, including chlorinated solvents and benzene, and fuel constituents in groundwater. Three cleanup alternatives were evaluated in the FS: (1) MA; (2) enhanced bioremediation and MA; and (3) SVE and MA. Enhanced bioremediation and MA would provide the greatest benefit at the lowest cost for AOC-090 and is the proposed cleanup action. Separate off-site CPOCs have been proposed for the shallow and intermediate groundwater zones due to different flow paths in the two zones. The City of Renton has agreed to allow the off-site CPOCs for this AOC along a public road and in the Cedar River Trail Park.

AOC-093: AOC-093 is an area of soil located north of Building 4-20, near the shore of Lake Washington, containing fuel products. AOC-093 was identified from a single push probe in January 2003 while delineating affected groundwater for AOC-001/002. COCs consist of gasoline in both soil and groundwater. Two cleanup alternatives were evaluated in the FS: (1) source area excavation and MNA; and (2) source area excavation, enhanced bioremediation, and MNA. Analytical results from the most recent soil sampling show that the concentration of soil COCs at AOC-093 is below the cleanup levels presented in the DCAP. Boeing proposes addressing any residual groundwater issues at this AOC through MNA.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

None

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No

- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

Yes. See the Site Plan (Exhibit A-2) attached.

- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No

b. Ground:

- 1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

Yes. One of the cleanup approaches for groundwater, enhanced bioremediation, requires injection of nutrient-rich water into the groundwater system. The nutrients are food-grade additives that promote growth of naturally occurring organisms in groundwater that break down and destroy contaminants of concern. The quantities will be determined during the design phase of the project.

Groundwater will be withdrawn for the purposes of monitoring contaminant concentrations.

- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals . . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

None

c. Water runoff (including storm-water):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

No additional impervious surfaces or runoff will be created by the project.

- 2) Could waste materials enter ground or surface waters? If so, generally describe.

No, see below.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

All stormwater drain inlets in and around the proposed construction operations and staging areas will be surrounded by appropriate containment/filtering devices to mitigate the potential of any hydraulic/fuel leakages emanating from construction machinery or from soil entering catch basins around the excavation area. In addition, to the extent practicable, soil to be excavated will be dumped directly into containers to minimize potential for erosion and impact.

4. Plants

- a. Check or circle types of vegetation found on the site:

 X deciduous tree: alder, maple, aspen, other
 evergreen tree: fir, cedar, pine, other
 X shrubs
 X grass
 pasture
 crop or grain
 wet soil plants: cattail, buttercup, bullrush, skunkcabbage, other
 X water plants: water lily, eelgrass, milfoil
 other types of vegetation

- b. What kind and amount of vegetation will be removed or altered?

None

- c. List threatened or endangered species known to be on or near the site.

None within the vicinity of the planned remediation areas specified in the Cleanup Action Plan.

- d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

None

5. Animals

- a. Circle any birds and animals, which have been observed on or near the site or are known to be on or near the site:

 X birds: hawk, heron, eagle,
songbirds, other: seagulls, crows

_____ mammals: deer, bear, beaver, other:

X fish: bass, salmon (Coho, Chinook, and Sockeye), trout (steelhead, cutthroat, and bull (native char), herring, shellfish, other: long fin smelt

- b. List any threatened or endangered species known to be on or near the site.

Puget Sound Steelhead are listed as "threatened," as are Puget Sound Chinook salmon and coastal/Puget Sound bull trout.

- c. Is the site part of a migration route? If so, explain.

Pacific Flyway for birds. Cedar River for migration of anadromous fish species.

- d. Proposed measures to preserve or enhance wildlife, if any:

None, river banks have native vegetation.

6. Energy and natural resources

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Electric, gasoline or diesel power

- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No

- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

To the extent practicable, the proposal uses natural processes to reduce soil and groundwater impacts to acceptable levels. This approach uses less energy than many other conventional approaches.

7. Environmental Health

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

Construction workers could be exposed to chemicals in affected soils or groundwater. Work will be monitored in accordance with a site-specific health and safety plan to control exposure to acceptable levels.

- 1) Describe special emergency services that might be required.

Boeing Fire Department will respond to any emergencies.

- 2) Proposed measures to reduce or control environmental health hazards, if any:

Measures will be specific to the anticipated problems and addressed in the site-specific health and safety plan.

b. Noise

- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

None

- 2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Temporary noise impacts during construction are anticipated. Construction projects of this type typically produce noise levels that range from 68 to 98 dba at 50 feet from the specific equipment.

Work will be limited to daylight hours, typically from 7 AM to 6 PM.

- 3) Proposed measures to reduce or control noise impacts, if any:

Work to be done during daylight hours

8. Land and shoreline use

- a. What is the current use of the site and adjacent properties?

The site is fully developed as an aircraft manufacturing and final assembly facility. The Renton Municipal Airport and the Cedar River Trail Park are adjacent to the manufacturing facility.

- b. Has the site been used for agriculture? If so, describe.

Yes, prior to the plant construction in 1941 by the US Government, there were some agricultural activities in this area.

- c. Describe any structures on the site.

The Renton Plant is a large airplane manufacturing and final assembly facility, consisting of many buildings and ancillary uses. The project site is adjacent to the Renton plant. The City of Renton boathouse is adjacent to the site.

- d. Will any structures be demolished? If so, what?
No
- e. What is the current zoning classification of the site?
Urban Center North (UC-N1 and UC-N2) and Industrial Medium (IM)
- f. What is the current comprehensive plan designation of the site?
UC-N1, UC-N2, and IM
- g. If applicable, what is the current shoreline master program designation of the site?
UC-N1, UC-N2, and IM
- h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.
The Cedar River is considered a sensitive area and portions of the facility susceptible to liquefaction are considered sensitive areas.
- i. Approximately how many people would reside or work in the completed project?
No changes
- j. Approximately how many people would the completed project displace?
None
- k. Proposed measures to avoid or reduce displacement impacts, if any:
None
- l. Proposed measures to ensure the proposal are compatible with existing and projected land uses and plans, if any:
Not applicable

9. Housing

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.
None

- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None

- c. Proposed measures to reduce or control housing impacts, if any:

None

10. Aesthetics

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

Not applicable

- b. What views in the immediate vicinity would be altered or obstructed?

None

- c. Proposed measures to reduce or control aesthetic impacts, if any:

None

11. Light and glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

None

- b. Could light or glare from the finished project be a safety hazard or interfere with views?

No

- c. What existing off-site sources of light or glare may affect your proposal?

Not applicable

- d. Proposed measures to reduce or control light and glare impacts, if any:

None

12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity?

The Cedar River Trail Park and the Renton Boathouse are within the general area of the Renton site.

- b. Would the proposed project displace any existing recreational uses? If so, describe.

No

- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

None

13. Historic and Cultural Preservation

- a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

None known

- b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

None have been identified on the project site.

- c. Proposed measures to reduce or control impacts, if any:

If artifacts are uncovered, work in that area will be halted pending notification and response from appropriate agencies.

14. Transportation

Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

The site has access to North 6th Street and Logan Avenue North.

- b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

Yes, Metro Public Transit. 150 yards.

- c. How many parking spaces would the completed project have? How many would the project eliminate?

Not applicable

- d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

No

- e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

Yes, the site is adjacent to the Renton Municipal Airport.

- f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

None

- g. Proposed measures to reduce or control transportation impacts, if any:

None

15. Public Services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

None is anticipated.

- b. Proposed measures to reduce or control direct impacts on public services, if any.

None

16. Utilities

- a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

All utilities are currently available at the site.

- b. Describe the utilities that are proposed for the project, the utility providing the service and the general construction activities on the site or in the immediate vicinity, which might be needed.

Short-term electrical power for construction equipment, long-term electrical power for operating pumps and blowers associated with remediation equipment.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I Understand that the lead agency is relying on them to make its decision.

Signature: Carl Bach Date Submitted: 1-27-2011
Carl Bach, Environmental Remediation Project Manager



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----- FACILITY BOUNDARY

VICINITY MAP
Boeing Renton Facility
Renton, Washington

By: APS

Date: 01/14/11

Project No. 8888

AMEC Geomatrix

Exhibit **A-1**



